7.0 AMBIENT IMPACT ASSESSMENT

This section describes the model selected, receptor grid development, and meteorological data used. The refined modeling analysis is being performed to show compliance with the AAC/AACCs and NAAQS as applicable. Appendix C includes a receptor grid printout and the modeling protocol.

7.1 AIR DISPERSION MODEL SELECTION

The EPA approved AERMOD model was chosen for this refined modeling analysis. AERMOD is a steady-state Gaussian plume model that considers simple and complex terrain.

7.2 RECEPTOR GRID SPACING

Receptors were placed along the facility fence line at 10-meter intervals and around the fencline at ten meter intervals out to 50 meters from the fence. A Cartesian receptor grid was developed outside the facility boundary. Receptors were placed at 25-meter spacing for a distance of 200 meters from the facility boundary. Receptors were placed at 50-meter spacing for distances out to 500 meters from the facility boundary.

7.3 RECEPTOR AND SOURCE ELEVATIONS

This facility is a proposed as a portable source. Receptor and source elevations are considered level terrain.

7.4 METEOROLOGICAL DATA

Five years (1988-1992) of meteorological data was used in this modeling analysis. Meteorological data was supplied by Idaho DEQ. Surface and upper air met data is from the Boise Air Terminal in Boise, Idaho.

7.5 MODEL INPUT PARAMETERS

Model input parameters for point sources are listed in Table 7-1, and model inputs for the process fugitive volume sources in Table 7-2.

TABLE 7-1
POINT SOURCE MODEL INPUT PARAMETERS
INTERSTATE CONCRETE AND ASPHALT CORP.
DOVER PORTABLE

Source Name	Source Description	UTM Easting (m)	UTM Northing (m)	Stack Height (ft)	Stack Diameter (ft)	Stack Temp (F)	Flowrate (fps)	PM_{10} Model Emission Rate (lb/hr)
SILO	storage silo filling	0	10	32.81	3.28	-460	0.0033	0.0060
WEIGHOP	weigh hopper loading baghouse	0	0	19.00	3.28	-460	0.0033	0.0150
SUPSILO	cement supplement silo	-10	10	32.81	3.28	-460	0.0033	0.0130

TABLE 7-2
VOLUME SOURCE
MODEL INPUT PARAMETERS
INTERSTATE CONCRETE AND ASPHALT CORP.
DOVER PORTABLE

Source ID	Source Description	Easting (X) (m)	Northing (Y) (m)	Release Height (m)	Horizontal Dimension (m)	Vertical Dimension (m)	PM_10 (lb/hr)
AGG&SAND	Aggregate/sand to/from storage pile	10	0	2.00	4.65	0.70	0.14
AGGTOSTO	Aggregate/sand to elevated storage	10	10	5.00	4.65	4.65	0.07
TRUCKLOD	truck loading	0	0	5.00	4.65	4.65	0.29

7.6 BUILDING DATA

Buildings data was provided by Idaho DEQ as part of their developing policy on batch cement plants. Below are the building parameters input into the model as provided by DEQ.

TABLE 7-3
BUILDING INPUT PARAMETERS
INTERSTATE CONCRETE AND ASPHALT CORP.
DOVER PORTABLE

Building ID	Height (m)	Width (m)	Length (m)	SW Corner UTM Easting (m)	SW Corner UTM Northing (m)
General Building	10	20	20	-10	-10

7.7 PM_{10} MODELING

The PM_{10} modeling analysis was performed to show compliance with the NAAQs for PM_{10}.

7.7.1 PM_{10} MODELING METHODS

The AERMOD model was run using the model inputs listed in Tables 7-1, and 7-2. The model calculated only the 24-hour PM_{10} maximum concentrations. Annual averages were not necessary because the facility has a potential to emit less than 1 ton per year of PM_{10} and is therefore not required per the Idaho modeling guidance.

7.7.2 NATIONAL AMBIENT AIR QUALITY STANDARDS

A source cannot be modified or constructed in an attainment area if the change would cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS).

7.7.3 PM_{10} MODELING RESULTS

Fenceline receptor (-31, 26) was the predicted high 6th high 24-hour high. Table 7-4 presents a comparison of PM_{10} modeling results with the respective NAAQS.

Two copies of all modeling files are provided in electronic format on CD-ROM.

TABLE 7-4
MODELED CONCENTRATIONS AND NAAQS
INTERSTATE CONCRETE AND ASPHALT CORP.
DOVER PORTABLE

Pollutant	Modeled Concentration (µg/m3)	NAAQS Averaging Period	Idaho Background Concentration (µg/m3)	Final Modeled Concentration (µg/m3)	NAAQS (µg/m3)
PM_{10}	65.64*	24-hour	73	139	150

Notes:
PM_{10} Particulate Matter (aerodynamic diameter < 10 microns)
$\mu g/m^3$ Micrograms per Cubic Meter
* High 6th High

7.7.4 PROPOSED SET BACK REQUIREMENT

A circular fenceline of 40 meters in diameter was used in the modeling analysis. The closest source to the fenceline is approximately 26 meters (85 feet). Therefore, a setback requirement of 85 feet from any school, public gathering place, etc. is proposed for this portable facility.

7.8 TAPs MODELING

The Toxic Air Pollutant (TAP) modeling analysis was performed to show compliance with the AAC/AACCs.

7.8.1 TAPs MODELING METHODS

The AERMOD model was run using emission rates calculated in the emission inventory for the Cement Silo, Fly Ash Silo, and Truck Mix Loading. Only pollutants which exceeded their ELs were modeled. Annual concentrations were determined for the remaining pollutants because they were being compared to their AACCs. The model input parameters are presented in Tables 7-1 and 7-2.

7.8.2 COMPARISON TO ACCEPTABLE AMBIENT CONCENTRATIONS

AACs and AACCs were reviewed for all compounds that exceeded their ELs. AACs are based on a 24-hour averaging period and AACCs are based on an annual averaging period. The emissions inventory was developed based on pollutant grouping rather than carcinogen/non-carcinogen groupings. Therefore AACs and AACCs were combined into one table.

As shown below in Table 7-5, all pollutants reviewed are below their respective AAC or AACC.

TABLE 7-5
TOXIC AIR POLLUTANTS
MODELED CONCENTRATIONS
INTERSTATE CONCRETE AND ASPHALT CORP.
DOVER PORTABLE

Pollutant	Modeled 24-hour Concentration ($\mu g/m^3$)	Modeled Annual Concentration ($\mu g/m^3$)	Idaho AAC/ AACC ($\mu g/m^3$)
Arsenic	-	9.00E-05	2.30E-04
Chromium (VI)	-	5.00E-05	8.30E-05

Notes:
$\mu g/m^3$ Micrograms per Cubic Meter

8.0 CONCLUSIONS

The proposed installation of Interstate Concrete and Asphalt Company's 150 cubic yard per hour portable concrete batch plant can be allowed in accordance with Idaho's Air Quality Regulations. Interstate Concrete and Asphalt Corp. – Dover Plant is a minor source, meets the toxic air pollutant AACs/AACCs, and will not cause or contribute to a violation of the NAAQS.

APPENDIX A

APPLICATION FORMS

DE/AFS/SF

Concrete Batch Plant **Form CBP**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline–1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 2
02/13/07

Please see instructions on page 4 before filling out the form.

GENERAL INFORMATION

Company Name:	Interstate Concrete and Asphalt Company		
Facility Name:	Dover Portable Plant	**Facility ID No:**	
Brief Project Description:	Portable Concrete Batch Plant		
Mailing Address:	845 West Kathleen Ave.		
City:	Coeur d'Alene	**State:**	Idaho
Zip Code:	83814	**County:**	
General Nature of Business & Products:	Asphalt and Batch Concrete		

Contact Name, Title:	Corky Witherwax		
Phone:	(208) 765-1144	**Cell:**	
Email:	cwitherwax@oldcastlematerials.com		

Owner or Responsible Official Name, Title:	C. Patrick McFarlane, President
Phone:	(208) 765-1144
Email:	

Proposed Initial Plant Location:	SE1/4, SW1/4, Section 25, Township 57 North, Range 3 East, Bonner County		
Nearest City:	Dover	**Estimated Startup Date:**	Spring '07
County:	Bonner		

Reason for Application:	☒ Permit to construct a new source ☐ Permit to operate an existing unpermitted source ☐ Permit to modify/revise an existing permitted source (identify the permit below) Permit No.: Issue Date: Facility ID:
☒ Check here to indicate you would like to review a draft permit prior to final issuance.	
Comments:	

CONCRETE BATCH PLANT INFORMATION

1. Concrete Batch Plant

Manufacturer:	McNeilus	**Model:**	Batch Master 12
Manufacture Date:			
Maximum Hourly Throughput:	150 (cy/hour)		
Maximum Daily Throughput:	1800 (cy/day)		
Maximum Annual Throughput:	(cy/year)		
Requested Annual Throughput:	250,000 (cy/year)		

2a. Cement Storage Silo Baghouse No. 1

Manufacturer:	McNeilus SFV170 (2)	**Model:**	
Stack Height from Ground:	52 (ft)	**Exit Air Flow Rate:**	(acfm)
Stack Inside Diameter:	(ft)	*** PM_{10} Control Efficiency:**	(%)
*** Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

2b. Cement Storage Silo Baghouse No. 2

Manufacturer:	McNeilus SFV170 (2)	**Model:**	
Stack Height from Ground:	52 (ft)	**Exit Air Flow Rate:**	(acfm)
Stack Inside Diameter:	(ft)	*** PM_{10} Control Efficiency:**	(%)
*** Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

2c. Cement Supplement (such as flyash) Storage Silo Baghouse No. 1

Manufacturer:	McNelius	**Model:**	
Stack Height from Ground:	(ft)	**Exit Air Flow Rate:**	(acfm)
Stack Inside Diameter:	(ft)	*** PM_{10} Control Efficiency:**	(%)
*** Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

2d. Cement Supplement (such as flyash) Storage Silo Baghouse No. 2

Manufacturer:	McNelius	**Model:**	
Stack Height from Ground:	(ft)	**Exit Air Flow Rate:**	(acfm)
Stack Inside Diameter:	(ft)	*** PM_{10} Control Efficiency:**	(%)
*** Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

3. Weigh Batcher Baghouse(s)

Manufacturer:	McNelius	**Model:**	BFV15
Stack Height from Ground:	19 (ft)	**Exit Air Flow Rate:**	64 (acfm)
Stack Inside Diameter:	(ft)	*** PM_{10} Control Efficiency:**	99.6 (%)
*** Manufacturer Grain Loading Guarantee:**			
* Attach manufacturer's PM_{10} control efficiency if available.			

ELECTRICAL GENERATOR SET INFORMATION (IF APPLICABLE)

Manufacturer:		**Model:**	
Maximum Rated Capacity:	☐ Hp ☐ kW		
Fuel Type:	☐ Gasoline ☐ Diesel ☐ Natural Gas ☐ Propane		
Maximum Fuel Usage Rate:	☐ gal./hr. ☐ cfh		
Maximum Daily Hrs. of Operations:	(hours/day)		
Maximum Annual Hrs. of Operations:	(hours/year)		
Stack Parameters:	Stack Height from Ground (ft): _____	Stack Exhaust Flow Rate (acfm):	_____
	Stack Inside Diameter (ft): _____	Stack Exhaust Gas Temperature (°F):	_____

ADDITIONAL GENERATOR (if applicable)

Manufacturer:		**Model:**	
Maximum Rated Capacity:	☐ Hp ☐ kW		
Fuel Type:	☐ Gasoline ☐ Diesel ☐ Natural Gas ☐ Propane		
Maximum Fuel Usage Rate:	☐ gal./hr. ☐ cfh		
Maximum Daily Hrs. of Operations:	(hours/day)		
Maximum Annual Hrs. of Operations:	(hours/year)		
Stack Parameters:	Stack Height from Ground (ft): _____	Stack Exhaust Flow Rate (acfm):	_____
	Stack Inside Diameter (ft): _____	Stack Exhaust Gas Temperature (°F):	_____

☒ **$1,000 PTC application fee enclosed**

Certification of Truth, Accuracy, and Completeness (by Responsible Official)
I hereby certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this and any attached and/or referenced document(s) are true, accurate, and complete in accordance with IDAPA 58.01.01.123-124.

C. Patrick McFarlane
Responsible Official Signature

President
Responsible Official Title

3/12/07
Date

C. Patrick McFarlane
Print or Type Responsible Official Name

APPENDIX B

EMISSION INVENTORY SPREADSHEETS

Interstate Concrete and Asphalt Company

Potential Emissions

Batch Concrete Plant - Dover Plant

February 19, 2007

Maximum Proposed Production

Concrete Production (yd3/hr)	150
Concrete Production (yd3/hr) Max.	1,314,000
Concrete Production (yd3/yr) restricted	250,000
Concrete Production (yd3/day) restricted	1800

Typical Concrete Makeup per yd3

	lbs	% of mix	ton/hr
Aggregate	1,865	46.3%	139.9
Sand	1,428	35.5%	107.1
Cement	491	12.2%	36.8
Fly Ash	73	1.8%	5.5
Water	167	4.2%	12.5
Total	4,024		301.8

Emissions Source	Percent Control	Uncontrolled PM_{10} Emission Factor (lb/ton)	Uncontrolled PM_{10} Emission Factor (lb/yd3)	Controlled PM_{10} Emission Factor (lb/yd3)	Emission Factor Reference	Controlled PM_{10} Potential Emissions (lb/hr)	Controlled PM_{10} Potential Emissions (tons/yr)
Aggregate Dump to Ground	75%	3.27E-03	3.05E-03	7.63E-04	AP-42, 13.2.4	0.057	0.095
Sand Dump to Ground	75%	9.86E-04	7.04E-04	1.76E-04	AP-42, 13.2.4	0.013	0.022
Aggregate Dump to Conveyor	75%	3.27E-03	3.05E-03	7.63E-04	AP-42, 13.2.4	0.057	0.095
Sand Dump to Conveyor	75%	9.86E-04	7.04E-04	1.76E-04	AP-42, 13.2.4	0.013	0.022
Aggregate Conveyor to Elevated Storage	75%	3.27E-03	3.05E-03	7.63E-04	AP-42, 13.2.4	0.057	0.095
Sand Conveyor to Elevated Storage	75%	9.86E-04	7.04E-04	1.76E-04	AP-42, 13.2.4	0.013	0.022
Cement Silo Loading		0.00034	8.35E-05	8.35E-05	AP-42, 11.12-2 (6/06)	0.006	0.010
Weigh Hopper Loading	95%	0.00240	3.95E-03	1.98E-04	AP-42, 11.12-2 (6/06)	0.015	0.025
Fly Ash Silo Unloading		0.00490	1.79E-04	1.79E-04	AP-42, 11.12-2 (6/06)	0.013	0.022
Truck mix loading	95%	0.27800	7.84E-02	3.92E-03	AP-42, 11.12-2 (6/06)	0.294	0.490
Totals:							0.90

Notes:

yd^3/hr	Cubic yards of concrete produced per hour
lb/yd3	Pounds per cubic yard
PM	Particulate Matter
PM_{10}	Particulate Matter with an aerodynamic diameter less than 10 microns

Aggregate and Sand Handling:

$E = k * (0.0032)[(U/5)^{1.3} / (M/2)^{1.4}]$ (AP-42, Section 13.2.4)

where: E = Emissions rate in pounds of PM10 per ton of material handled
k = particle size multiplier for PM10 (0.35)
U = Wind speed (miles per hour)
M = Material moisture content (percent weight)

$E_{aggregate}$ =	0.00327 lb/ton agg	U =	10
E_{sand} =	0.00099 lb/ton sand	$M_{aggregate}$ =	1.77
		M_{sand} =	4.17

Note: Aggregate and Sand handling controlled by 75% water sprays.

Interstate Concrete and Asphalt Company

Potential Emissions

Batch Concrete Plant - Dover Plant

2/19/07

		Typical Concrete Makeup per yd3	lbs	% of mix
Maximum Proposed Production				
Concrete Production (yd3/hr)	150	Aggregate	1865	46.35%
Concrete Production (yd3/hr) Max.	1,314,000	Sand	1428	35.49%
Concrete Production (yd3/yr) restricted	250,000	Cement	491	12.20%
Concrete Production (yd3/day) restricted	1,800	Fly Ash	73	1.81%
		Water	167	4.15%
		Total	4024	

Pollution Control Equipment: Baghouse

AP-42 Edition: Jun-06

Pollutant	Cement Silo Filling Emission Factor (lb/ton)	Cement Silo Filling Emission Factor (lb/yd3)	Truck Filling Uncontrolled Emission Factor (lb/ton)	Truck Filling Controlled * Emission Factor (lb/yd3)	Flyash Filling Emission Factor (lb/ton)	Flyash Filling Emission Factor (lb/yd3)	Emission Factor Reference	Silo Filling Emissions lb/hr	Truck Filling Emissions lb/hr	Flyash Filling Emissions lb/hr	Total lb/hr	Idaho EL (lb/hr)	Modeled 24-hour Concentration (µg/m3)	Modeled Annual Concentration (µg/m3)	Idaho AAC (mg/m3)	Idaho AAC/ AACC (µg/m3)
Arsenic	4.24E-09	1.04E-09	3.04E-08	4.29E-08	1.00E-06	3.65E-08	AP-42, Table 11.12-8 (6/06)	2.97E-08	1.22E-06	1.04E-06	2.29E-06	1.50E-06	-	9.00E-05		2.30E-04
Beryllium	4.86E-10	1.19E-10	2.44E-07	3.44E-09	9.04E-08	3.30E-09	AP-42, Table 11.12-8 (6/06)	3.41E-09	9.82E-08	9.42E-08	1.96E-07	2.80E-05	-	-		4.20E-03
Cadmium	4.86E-10	1.19E-10	3.42E-08	4.82E-10	1.98E-10	7.23E-12	AP-42, Table 11.12-8 (6/06)	3.41E-09	1.38E-08	2.06E-10	1.74E-08	3.70E-06	-	-		5.80E-04
Chromium	2.90E-08	7.12E-09	1.14E-05	1.61E-07	1.22E-06	4.45E-08	AP-42, Table 11.12-8 (6/06)	2.03E-07	4.59E-06	1.27E-06	6.06E-06	3.30E-02	-	-	2.50E-02	25
Chromium (VI)	5.80E-09	1.42E-09	2.28E-06	3.21E-08	3.66E-07	1.34E-08	DEQ Guidance	4.06E-08	9.17E-07	3.81E-07	1.34E-06	5.60E-07	-	5.00E-05		8.30E-05
Manganese	1.17E-07	2.87E-08	8.12E-05	8.83E-07	2.56E-07	9.34E-09	AP-42, Table 11.12-8 (6/06)	8.20E-07	2.46E-05	2.67E-07	2.57E-05	3.33E-01	-	-	2.50E-01	250
Nickel	4.18E-08	1.03E-08	1.19E-05	1.68E-07	2.28E-06	8.32E-08	AP-42, Table 11.12-8 (6/06)	2.93E-07	4.79E-06	2.38E-06	7.46E-06	2.70E-05	-	-		4.20E-03
Phosphorus	ND	ND	3.84E-05	5.41E-07	3.54E-06	1.29E-07	AP-42, Table 11.12-8 (6/06)	ND	1.55E-05	3.69E-06	1.91E-05	7.00E-03	-	-	5.00E-03	5
Selenium	ND	ND	2.62E-06	3.69E-08	7.24E-08	2.64E-09	AP-42, Table 11.12-8 (6/06)	ND	1.05E-06	7.54E-08	1.13E-06	1.30E-02	-	-	1.00E-02	10

* Controlled 95%

lb/hr Pounds per Hour

mg/m^3 Milligrams per Cubic Meter

$\mu g/m^3$ Micrograms per Cubic Meter

EL Emissions Level

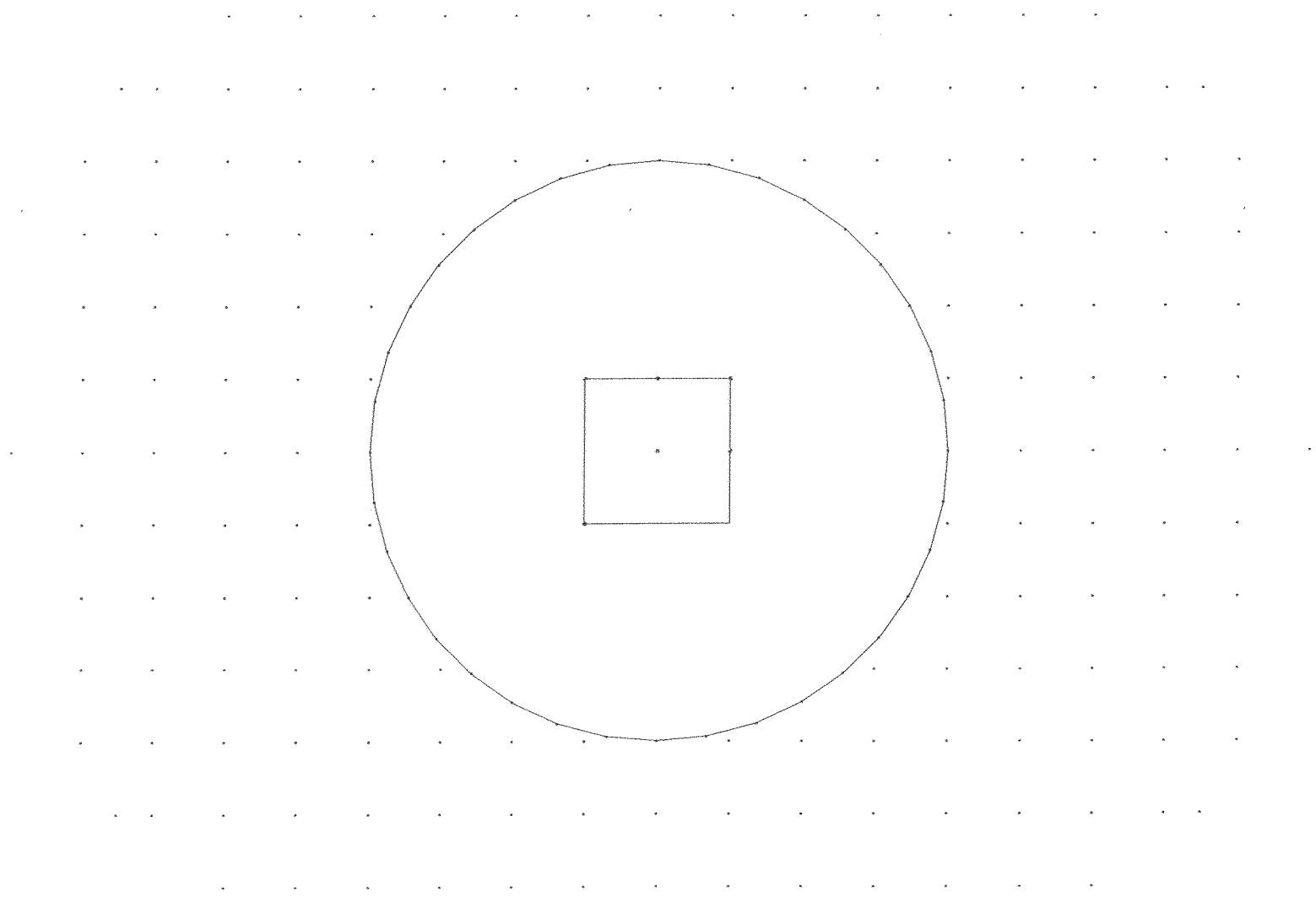
AAC Acceptable Ambient Concentration

AACC Acceptable Ambient Concentration for Carcinogens

APPENDIX C

RECEPTOR GRID PRINTOUT AND MODELING PROTOCOL

Interstate Concrete and Asphalt Company - Fenceline Receptors

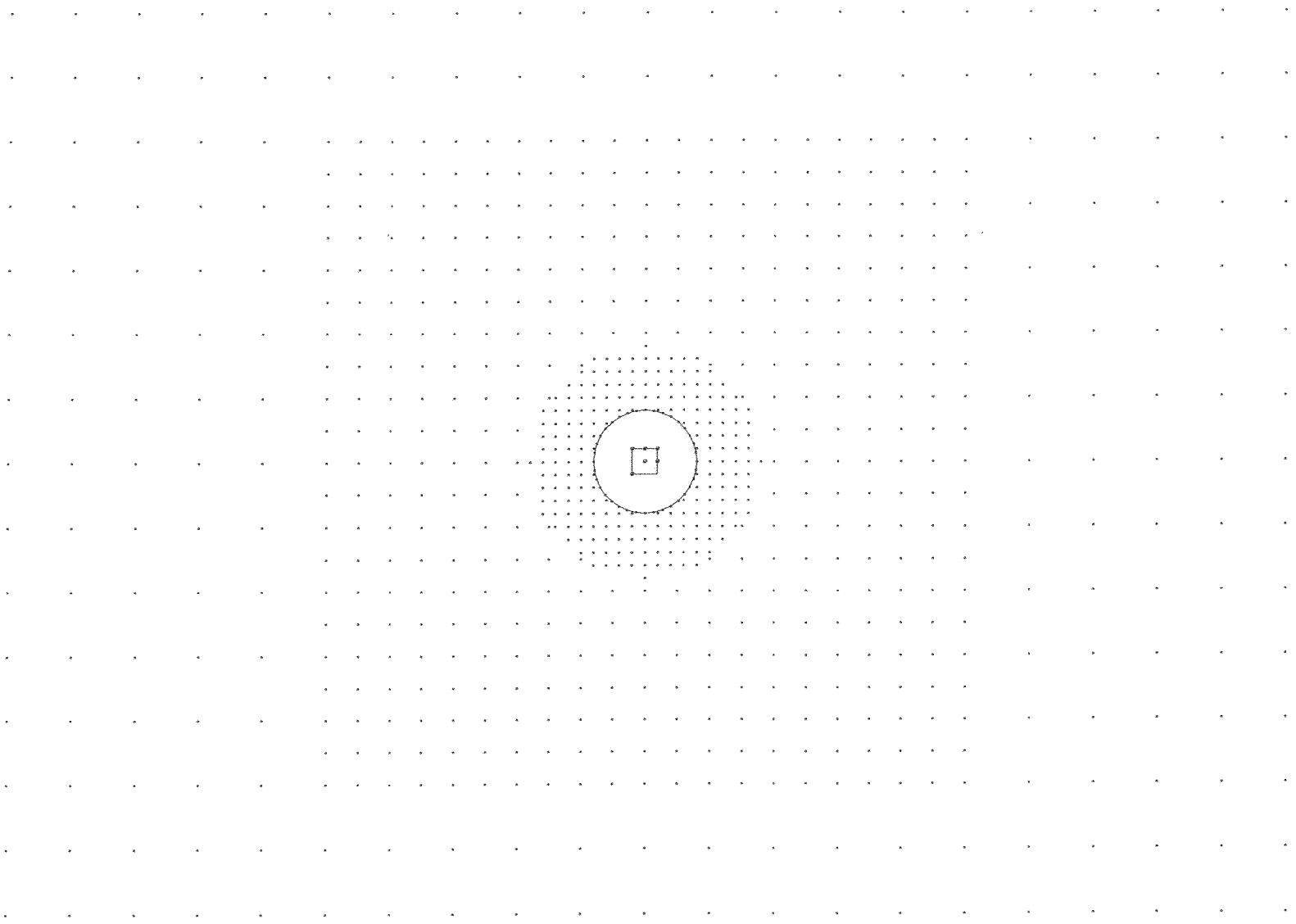


Concrete Batch Plant

F:\Projects\2007\ICA07002\Model\Dovermodel2.BST

Scale: 1" = 22.5 Meters

Interstate Concrete and Asphalt Company - Receptors 200 meters out

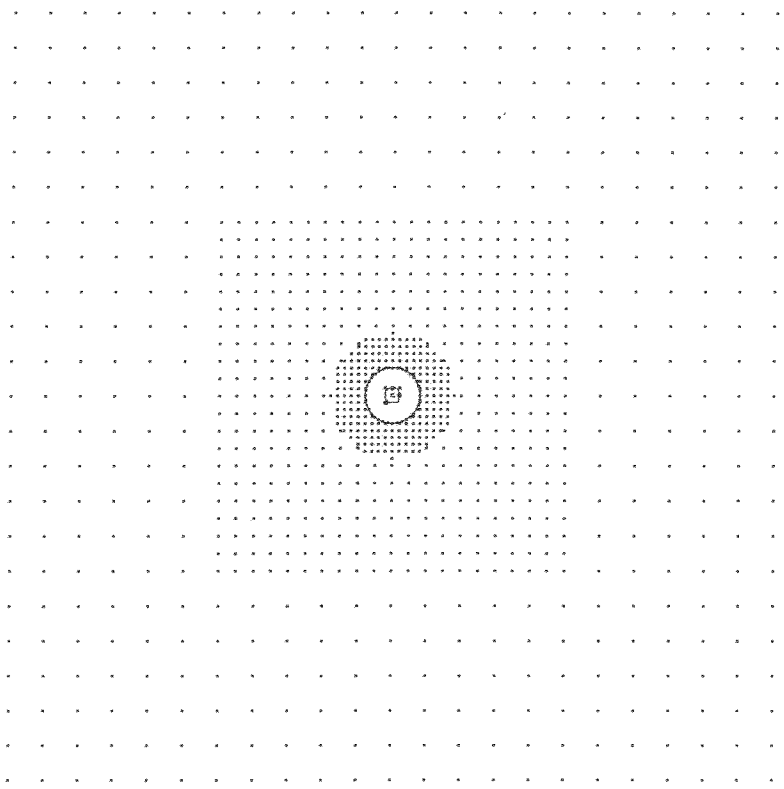


Concrete Batch Plant

F:\Projects\2007\ICA07002\Model\Dovermodel2.BST

Scale: 1" = 123.5 Meters

Interstate Concrete and Asphalt Company - Receptors 500 meters out



Concrete Batch Plant

F:\Projects\2007\ICA07002\Model\Dovermodel2.BST

Scale: 1" = 277.8 Meters

Mark Peterson

From: Kevin.Schilling@deq.idaho.gov
Sent: Wednesday, February 21, 2007 9:29 AM
To: mark@aspence.net
Subject: RE: ICA Modeling Protocol

Mark,

I have reviewed your revised protocol and have determined the proposed methods and data are acceptable. When determining the setback, please use the distance from the nearest emissions source to the receptor location having the maximum 6th highest modeled PM10 value for the 24-hour standard and the maximum 1st high modeled PM10 value for the annual standard, whichever is larger.

Thank you,

Kevin Schilling
Stationary Source Air Modeling Coordinator
Idaho Department of Environmental Quality
208 373-0112

From: Mark Peterson [mailto:mark@aspence.net]
Sent: Tuesday, February 20, 2007 3:35 PM
To: Kevin Schilling
Subject: ICA Modeling Protocol

Kevin,

Here is our revised protocol. Please let me know if you need anything else.

Thanks,
Mark

Air Dispersion Modeling Protocol – Concrete Batch Plant

Proposed Project: Interstate Concrete and Asphalt is proposing a portable 150 yd^3/hr batch concrete facility. Interstate proposes limits of1,800 yd^3/day and 250,000 yd^3/yr of concrete. This plant will be known as the Dover Plant.
Location: The initial location will be near Dover, Idaho in Bonner County.

1) An emissions inventory (EI) based on the plant's capacity and proposed maximum daily and annual operations will be included with the application, and will comply with the following:

   a. Emissions will be calculated using AP-42 emission factors and good engineering judgment.
   b. Fugitive emissions sources will be included in the EI, except for emissions resulting from vehicle traffic and wind erosion from storage piles.
   c. The level of emissions control assumed for each source will be clearly specified.
   d. Cr+6 will be presumed to comprise 20% of the total chromium emissions from cement silo filling, and 30% of the total chromium emissions from cement

supplement (flyash) silo filling.

2) The proposed project will meet all of the criteria specified below, and Interstate Concrete and Asphalt agrees to accept permit conditions requiring continuing compliance with the physical parameters and setback distance(s) established by the refined modeling analysis. Interstate Concrete and Asphalt is requesting that the DEQ generic model results (with adjustments made for the lower emission rates and run on Boise Met data supplied by DEQ) be used to demonstrate preconstruction compliance with NAAQS and TAPs for this project. An additional modeling analysis will be submitted for this project to determine the set back requirement. Set back will be determined based on a circular fenceline of a diameter sufficient to meet the standards. The set back will be proposed as the distance from the nearest source to the fenceline location nearest the high receptor.

Table 1. CRITERIA FOR USING DEQ's CONCRETE BATCH PLANT GENERIC MODELING RESULTS FOR AIR IMPACT ANALYSES

Parameter	Criteria
Concrete batch plant type	Truck mix (redi-mix) plant
Operation in any PM_{10} nonattainment area.	Not proposed.
Maximum daily concrete production	1,800 yd^3/day
Maximum annual concrete production	250,000 yd^3/yr
Minimum stack height for cement and supplement storage silo baghouse(s)	10 meters (32.8 ft)
Minimum stack height for weigh hopper loading baghouse (s)	10 meters (32.8 ft)
Minimum distance from nearest edge of any emissions source to the ambient air boundary	Based on Model Results
Minimum distance from nearest edge of any emissions source to any other source of emissions, including another concrete batch plant, hot mix asphalt plant, or rock crushing plant.	200 meters (656 ft)
Minimum control of truck-mix loadout source	95% Control e.g., Boot/shroud, water sprays, or baghouse/cartridge filter
Minimum control of weigh hopper loading	95% Control e.g., boot/shroud, water sprays, or baghouse/cartridge filter
Minimum control of fugitive emissions from aggregate and sand transfer point sources	75% Control e.g., water sprays, shrouds, or sand/aggregate is wet on an as-received basis, and used before significantly drying out.
Presence of a generator	No generator.